REMARKS

In the above-identified office action the Examiner has rejected claims 1-7 as being anticipated by Scott et al. The Examiner has delineated those portions of Scott et al. that he believes correspond to the elements of claim 1 and concludes that Scott shows each such feature. Applicant disagrees with the Examiner's interpretation of Scott and conclusions based thereon.

Contrary to the assertions of the Examiner, claim 1 differs from the disclosure of Scott in that Scott does not teach a digital signal-processing device similar to that of the present invention. Further, Scott does not show a second circuit being connected to the signal-processing device. The isolation barrier for separating the first and second circuit are not the type transformer such as recited in claim 1. Thus, the isolation barrier does also not contain a first winding and a second winding for DC-decoupling. Finally, Scott does not disclose a bi-directional transmission of the signals by a frequency division multiplex method.

Thus, contrary to the statement of the Examiner, the subject matter of present claim 1 is novel over Scott and is also nonobvious there over. The Examiner states that Scott discloses a device for a DC-decoupled connection of a telephone line into a signal-processing device, which is a modem. Typically, a modem for telephone communication contains a signal processing devices such as a DSP for processing input signals and providing output signals for the further transmission over the telephone line. However, in the present invention the modem is the device itself but not the signal-processing device. Therefore, Scott does not disclose explicitly a digital signal processing device and especially not the special arrangement of this digital signal processing device and a subscriber line of the telephone line.

The modem in Scott contains a second circuit with reference number 116. However, this circuit 116 cannot be compared to the second circuit of claim 1. In Scott, the circuit 116 is connected on the one side with an isolation barrier 120 and on the other side with a supply voltage. This circuit 116 is therefore not connected to the signal-processing device as recited in claim 1.

Furthermore, circuit 116 has a different functionality compared to the second circuit according to claim 1. Circuit 116 is designed in such a manner to protect the public phone system and also to comply with governmental regulations. This so-called power circuit is connected on the

one side with the comparable low voltage telephone line and on the other side with a comparable high supply voltage. The function of this circuit 116 is to prevent dangerous or destructive voltage or current levels from entering to the phone system. This function of circuit 116 is set forth explicitly in Scott (column 6, line 67 - column 7, line 6). Therefore, circuit 116 in D1 and the second circuit according to claim 1 of the present invention are different by their functionality and also by their construction.

The main difference between Scott and present claim 1 lies in the isolation device which isolates the first and the second circuit from each other. The Examiner states that the transformer forms the so-called isolation barrier 120 in D 1. For this statement he refers to the description in column 1, line 56 - column 2, line 4. However, this is not correct, since the cited reference describes the prior art, but not Scott. Scott rather shows two capacitors forming the isolation device. Each of these capacitors is used for one of the data parts between the signal processing device and the telephone line. In contrast to this, the present invention uses a single transformer providing an isolation functionality between the telephone line and the signal-processing device.

The Examiner in charge however refers to the introduction of the description in Scott, where in column 1, line 57 - column 2, line 33 the pertinent prior art is disclosed. In a first embodiment of the prior art the isolation barrier is taught to be commonly implemented by using a single transformer. However, analog signal communication through a single transformer is subject to low frequency bandwidth limitations. In addition analog signal communication using a single transformer exhibit distortion caused by core non-linearities. A further disadvantage of a single transformer lies in the relative high size, weight and cost (column 2, lines 3-8.), which therefore teaches against the use of a single transformer as herein.

Therefore, typically two transformers are used for decoupling: the first transformer being used for the data path to the telephone line and the second transformer being used for the data path from the telephone line. This solution, using two transformers, shows basic cost disadvantages.

The invention of Scott overcomes these disadvantages of the prior art by using capacities for the decoupling of the two devices and thus of the data path. The prior art

discussed in the introduction of Scott refers to conventional analog telephone subscriber lines, which are often used as a data transmission medium.

For the purpose of isolating the end terminals galvanically from local ground potential, typically transformers with a first and a second winding arc used which are galvanically isolated from each other. One object of these transformers is to be constructed as compact as possible and in addition to that to allow voice and data transmission as well in a tower frequency range and in a higher frequency range. This is well known for a person skilled in the art and is also disclosed in the introduction part of Scott. The disadvantage of the known technique is on the one side that two single transformers are used for each transmission pan of the data signals. On the other side, using a transformer, this transformer can only be used for low frequency and signals.

The present invention overcomes these disadvantages by establishing a single transformer for establishing a galvanically isolated connection between the telephone line and a signal-processing device at the subscriber and of the telephone line. The present invention has the basic advantage that only one transformer is required for both transmission directions, which results in a lower cost of the whole device. Therefore, the first and the second circuit are configured in such a way that the signal from the telephone line in the direction of the signal processing device and from the signal processing device back to direction of the telephone line can be transmitted bi-directional, whereas the isolation is being performed by a time division multiplex method or a frequency division multiplex method. This allows operation via the transformer for both transmission directions.

This structure of the present invention is neither disclosed nor suggested by Scott.

Applicant hereby requests reconsideration and reexamination thereof.

With the above amendments and remarks, this application is considered ready for allowance and Applicant earnestly solicits an early notice of same. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, he is respectfully requested to call the undersigned at the below-listed number.

Respectfully submitted,

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Date: April 5, 2004
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